B.C. Timber Sales
Strait of Georgia Business Area

2006
Strathcona
Forest Stewardship Plan

Amendment # 1 (dated June 2, 2008)-remove TSM, add “Holder of the Plan”
Amendment # 2 (no text changes required) (dated August 15, 2008) - sign on Tlowitsis FL A89649
Amendment # 3 (March, 2009) - remove Tlowitsis FL A89649
Amendment # 4 (March 25, 2009) - amend. MAMU, and sec. 5.4.3
Amendment # 6 (August 27, 2009) Add Kyuquot First Nation NRFL A84558 as a holder of the FSP
Consolidated to Amendment # 7 (November 4, 2009) - Minor text changes: update designations table, FSP s. 5.1.1.1 and s 5.1.3
Consolidated to Amendment # 8 (Approved March 2, 2012) - extension, update designations, changes to FDU

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Forest Stewardship Plan

1. Date of Submission

The date of submission of this Forest Stewardship Plan (FSP) is October 26, 2006.

2. Term of the FSP (FRPA s .6(1)(a)) and (2)

The original term of this FSP was 5 years commencing on March 1, 2007. The FSP holder has requested an extension to this FSP for an additional 5 year term consistent with S. 6(2) of the FPPR. The extension expires March 1, 2017, as specified by the Minister.

3. Commencement of Term (FRPA s. 6(1)(b))

The term of this FSP will begin on the date specified by the Minister or his Delegated Decision Maker (DDM) which is March 1, 2007.

4. Map (FRPA s. 5(1)(a)) and (FPPR s. 14)

The attached FSP maps show the boundaries of the forest development units (FDUs) under this FSP. This FSP includes the Sayward, Salmon, Adam/Eve, Naka, Tsitika, Gold, Burman, Tahsish, Artlish, Kashutl, Kaouk, Simms, Upper Campbell Landscape Units.

Any roads or road corridors identified on the British Columbia, Canada and Maa-Nulth consensus maps dated March 11, 2005 (or as subsequently amended) that are to be excluded from Maa-Nulth treaty land are included from the FDUs.

4.1 Protection of Cutblocks and Roads from FDP to FSP (FRPA s. 196(1) or (2), FPPR s.110, (FPPR s. 14(1)(c))

Cutblocks and roads included in Forest Development Plans (FDP) as shown in the original FSP maps that are within a FDU under this FSP and considered approved under FRPA s.196(1) or (2), including those cutblocks referred to in FPPR s.110.

4.2 Designation in Effect at Date of Submission of this FSP (FPPR s.14(3))

The FSP maps show the designations and requirements described in FPPR s.14(3) that were in effect on the Date of Submission, including, for ease of reference, the designations listed in Table 1, below.

Table 1: FPPR 14(3) Designations for Strathcona FSP

FPPR 14 (3)(a) Ungulate Winter Ranges	**LU**	**Date Designated**
UWR U1-004	Johnstone, Salmon, Sayward	December 17, 2003
UWR U1-014	Gold, Burman	December 14, 2004
UWR U1-005	Kashutl, Tahsish, Artlish, Kaouk, Gold, Sayward, Salmon	July 20, 2006
FPPR 14 (3)(b) Wildlife Habitat Areas	**LU**	**Date Designated**
WHA 1-005	Sayward	June 11, 2002
FPPR 14 (3)(b) Wildlife Habitat Areas Cont'd	**LU**	**Date Designated**
WHA 1-088	Gold	December 1, 2004
WHA 1-090	Gold	December 1, 2004
WHA 1-091	Sayward	December 1, 2004
WHA 1-093	Tsitika	December 1, 2004

WHA 1-094	Gold	December 1, 2004
WHA 1-095	Gold	December 1, 2004
WHA 1-096	Sayward	December 1, 2004
WHA 1-135	Artlish	December 2, 2004
WHA 1-136	Artlish	December 2, 2004
WHA 1-137	Artlish	December 2, 2004
WHA 1-138	Artlish	December 2, 2004
WHA 1-139	Artlish	December 2, 2004
WHA 1-140	Artlish	December 2, 2004
WHA 1-141	Artlish	December 2, 2004
WHA 1-142	Artlish	December 2, 2004
WHA 1-143	Artlish	December 2, 2004
WHA 1-144	Artlish	December 2, 2004
WHA 1-145	Artlish	December 2, 2004
WHA 1-146	Artlish	December 2, 2004
WHA 1-147	Artlish	December 2, 2004
WHA 1-148	Artlish	December 2, 2004
WHA 1-149	Artlish	December 2, 2004
WHA 1-150	Artlish	December 2, 2004
WHA 1-151	Tahsish	December 2, 2004
WHA 1-152	Tahsish	December 2, 2004
WHA 1-153	Tahsish	December 2, 2004
WHA 1-154	Tahsish	December 2, 2004
WHA 1-155	Tahsish	December 2, 2004
WHA 1-156	Tahsish	December 2, 2004
WHA 1-157	Tahsish	December 2, 2004
WHA 1-158	Tahsish	December 2, 2004
WHA 1-159	Tahsish	December 2, 2004
WHA 1-160	Tahsish	December 2, 2004
WHA 1-161	Tahsish	December 2, 2004
WHA 1-162	Tahsish	December 2, 2004
WHA 1-163	Tahsish	December 2, 2004
WHA 1-164	Tahsish	December 2, 2004
WHA 1-115	Kashutl	December 13, 2004
WHA 1-116	Kashutl	December 13, 2004
WHA 1-117	Kashutl	December 13, 2004
WHA 1-118	Kashutl	December 13, 2004
WHA 1-119	Kashutl	December 13, 2004
WHA 1-120	Kashutl	December 13, 2004
WHA 1-122	Kashutl	December 13, 2004
WHA 1-124	Kashutl	December 13, 2004
WHA 1-125	Kashutl	December 13, 2004
WHA 1-126	Kashutl	December 13, 2004
WHA 1-128	Kashutl	December 13, 2004
WHA 1-129	Kashutl	December 13, 2004

FPPR 14 (3)(c) Fisheries Sensitive Watersheds	**LU**	**Date Designated**
Artlish River	Artlish	December 28, 2005 and As per Schedule 2 FPPR Sec. 8.1
FPPR 14 (3)(d) Lakeshore Management Zones	**LU**	**Date Designated**
Riparian Reserve Zones established for Lakes within the Sayward LU by the District Manager	Sayward	February 26, 2003
FPPR 14 (3)(e) Scenic Areas	**LU**	**Date Designated**
Scenic areas as established by the District Manager	All	December 14, 2005
FPPR 14 (3) (f) L1 Lake	**LU**	**Date Designated**
		None designated
FPPR 14 (3) (g) Community Watersheds	**LU**	**Date Designated**
John Hart Lake	Sayward	May 29, 2001
FPPR 14 (3)(h) Old Growth Management Areas	**LU**	**Date Designated**
Established OGMAs as per the Sayward Landscape Unit Plan	Sayward	July 1, 2003 (established)
Established OGMAs as per the Ministerial Order for Land Use Objectives for Old Growth Management Areas	Tsitika, Naka, Adam-Eve, Salmon	July 26, 2010

4.3 Areas Within FDU's Subject to a Road Permit or Timber Sale Licence But Not **Subject to this FSP (FPPR s. 14 (3)(k))**

For the purposes of FPPR s.14(3)(k), the FSP maps identify the areas that are subject to a road permit, Timber Sale Licence and Cutting Permit in effect on the date of commencement of this FSP. The Forest Practice Code of British Columbia Act (FPC) and regulations will continue to apply to these permits as per FPPR s.197(7).

5. Results and Strategies

5.1 Land Use Objectives (FPPR s.1 definition)

5.1.1 Order Establishing Landscape Unit and Objectives

A Landscape Unit Plan was established on July 1, 2003 under FPC s.4 for the Sayward Landscape Unit.

Objectives Set by Government for the Sayward Landscape Unit

- ***OBJECTIVE 1***

1. *Maintain or recruit old growth forest attributes in designated old growth management areas (OGMA, OGMA/UWR for Deer, and OGMA/UWR for Elk), as shown on the attached Sayward Landscape Unit map, titled Biodiversity and Wildlife. Timber harvesting, including salvage, single-tree selection, topping for cone harvesting, and commercial gathering of botanical forest products, will not be permitted within OGMAs except as specified in sections 2 and 3 below.*

2. *The Delegated Decision Maker (DDM) may allow operations to occur within an OGMA that are not to be established as UWR for Deer or Elk for reasons such as but not limited to the following:*

   (1) To prevent the spread of insect infestations or diseases that pose a significant threat to forested areas outside of OGMAs. This will be done in a manner that retains as many old growth forest attributes as possible.
   (2) Construction of roads if no other practicable option exists.
   (3) Partial-cut timber harvesting within immature (<100 years old) portions of OGMAs, where it can be demonstrated that harvesting will accelerate development of old growth forest attributes and improve the stand for biodiversity purposes, without compromising other resource values.

3. *The following do not require the approval of the Delegated Decision Maker before proceeding:*

   (1) Maintenance, deactivation, removal of danger trees, or brushing and clearing on existing roads under active tenure within the right-of-way for safety purposes.
   (2) Felling of guyline clearance, tailhold anchor trees, or danger trees (except high value live wildlife trees[1]) along cutblock boundaries or within the right of way on new road/bridge alignments to meet safety requirements. These trees are to be retained on site for coarse woody debris.
   (3) Intrusions, less than 0.5 hectare is size for OGMA's that are not to established as UWR for Deer or Elk.
   (4) OGMAs that are not to be established as UWR for Deer or Elk that are > 10ha in size may be modified for operational reasons provided that replacement OGMA of like or better quality and quantity is identified in order or priority, 1) immediately adjacent to the existing OGMA, or 2) in the same variant and landscape unit as the existing OGMA such that OGMA ecological attributes and spatial distribution are maintained or improved in one of the following categories:

      i) OGMAs >10ha to < 50ha in size where the proposed development affects the OGMA by <5ha,
      ii) OGMAs ≥ 50ha to < 100ha in size where the proposed development affects the OGMA by < 10ha,
      iii) OGMAs ≥ 100ha in size where the proposed development affects the OGMA by <10%,
      iv) Construction of ≤ 500m of road or a bridge within an OGMA where there is no other practicable option. As an alternative to finding replacement area, the licensee may deactivate or rehabilitate a temporary road or bridge site within four years after construction,
      v) Construction of rock quarries and gravel pits under authority of forest tenure where the development will be located immediately adjacent to existing roads under tenure and will affect the OGMA by <0.5 ha.

FDU	Result or Strategy
Sayward	1. The holder(s) of the FSP will not carry out or authorize road construction or timber harvesting, including salvage, single-tree selection, topping for cone harvesting, and commercial gathering of botanical forest products, within OGMAs delineated as part of the Sayward Landscape Unit Plan established July 1, 2003 except : a) As agreed upon in writing by the DDM for activities within an OGMA not established as UWR for Deer or Elk including but not limited to the following ; i) timber harvesting may occur to prevent the spread of insect infestations or disease that pose a significant threat to forested areas outside of OGMAs, ii) road construction may occur if no other practicable option exists,

	iii) partial-cut timber harvesting within immature portions of OGMAs, where it can be demonstrated that harvesting will accelerate development of old growth forest attributes and improve the stand for biodiversity purposes, without compromising other resource values. b) under the following permissible activities within OGMAs established as part of the Sayward LUP do not require approval of the DDM; i) maintenance, deactivation, removal of danger trees, or brushing and clearing on existing roads under active tenure within the right-of-way for safety purposes, ii) felling of guyline clearance, tailhold anchor trees, or danger trees (except high value wildlife trees) along cutblock boundaries or within the right-of-way on new road/bridge alignments to meet safety requirements, iii) intrusions less than 0.5 ha in size for OGMAs that are not established as UWR for Deer or Elk, iv) OGMAs that are not established as UWR for Deer or Elk that are > 10ha in size may be modified for operational reasons provided that replacement OGMA of like or better quality and quantity, as determined by a qualified professional, is identified in order of priority; 1) immediately adjacent to the existing OGMA, or 2) in the same variant and landscape unit as the existing OGMA such that overall OGMA ecological attributes and spatial distribution are maintained or improved in one of the following categories: (1) OGMAs ≥10 ha to <50 ha in size where the proposed development affects the OGMA by < 5ha, (2) OGMas ≥50 ha to <100 ha in size where the proposed development affects the OGMA by <10 ha, (3) OGMAs ≥100 ha in size where the proposed development affects the OGMA by <10 %, (4) construction of ≤500 m of road or a bridge within an OGMA where there is no other practicable option. As an alternative to finding replacement area, the licensee may deactivate or rehabilitate a temporary road or bridge site within four years after construction, (5) construction of rock quarries and gravel pits under authority of forest tenure where the development will be located immediately adjacent to existing roads under tenure and will affect the OGMA by <0.5 ha. 2. Section 1 of this strategy applies to subsequent amendments to OGMAs delineated within the Sayward LUP.

- ***OBJECTIVE 2***

Maintain stand level structural diversity by retaining wildlife tree patches (WTP). Cutblocks for which harvesting has been completed by each licensee by tenure will maintain adequate amounts of wildlife tree patches to ensure that over any 5 year period, commencing on the date the objectives are established, the target percentage as noted in Table A is achieved. In addition:

(1) WTPs must be well distributed across the BEC subzone or variant.
(2) No timber harvesting, including salvage or single tree selection, is to occur within Wildlife Tree Patches.
(3) WTPs must include, if present, live and dead veteran trees (excluding danger trees), or remnant old growth patches.
(4) WTPs must include larger trees for the stand and existing moderate to high value wildlife trees (excluding danger trees).
(5) BEC subzones and/or variants will be determined by site plan information.

Table A. Wildlife Tree Retention by BEC subzone in the Sayward Landscape Unit.

BEC Subzone	***% Wildlife Tree Retention***
CWHmm1 (Coastal Western Hemlock, Submontane moist maritime)	*13*
CWHmm2 (Coastal Western Hemlock, Montane moist maritime)	*10*
CWHxm (Coastal Western Hemlock, Very Dry Maritime)	*14*
MHmm1(Mountain Hemlock, Windward moist maritime)	*2*

<table>
<tr><td>FDU</td><td>Result or Strategy</td></tr>
<tr><td>Sayward</td><td>1. The holder(s) of the FSP will identify Wildlife Tree Retention Patches for cutblocks for which harvesting has been completed to ensure that over any 5 year period the target percentages noted in the table below are achieved.

<table>
<tr><th>BEC Subzone</th><th>Total WTR (%)</th></tr>
<tr><td>CWHmm1</td><td>13</td></tr>
<tr><td>CWHmm2</td><td>10</td></tr>
<tr><td>CWHxm</td><td>14</td></tr>
<tr><td>MHmm1</td><td>2</td></tr>
</table>
2. Wildlife Tree Retention Patches will:
a) be distributed across the BEC subzone or variant as determined by site plan information,
b) not be subject to timber harvesting, including salvage or single tree selection,
c) include, if present, live and dead veteran trees, (excluding danger trees), or remnant old growth patches, and
d) include, when possible, larger trees for the stand and existing moderate to high value wildlife trees (excluding danger trees).
e) Site plans will include a description of the Wildlife Tree Patch and rationale for its location and inclusion of features identified above in 2.c and 2.d.</td></tr>
</table>

- ***OBJECTIVE 3***

Provide for spring forage adjacent to Ungulate Winter Ranges/Deer, as indicated on the Sayward Landscape Unit map, titled Biodiversity and Wildlife by managing seral stages as follows:

- *Identifying Ungulate Winter Ranges/Deer within the Strathcona Timber Supply Area and determining all areas within 2 km that are on slopes 40 to 100% and with an aspect of exposure from 90 through 270*

degrees and, ensuring that no more than 25% of this area be younger than 20 years old at any point in time; or

Identifying Ungulate Winter Ranges/Deer within Tree Farm Licence 39 and managing as per the Weyerhaeuser Standard Operating Procedure for the Management of Critical Spring Forage Adjacent to Black-tailed Deer Winter Ranges, dated and approved November 29, 2001.

FDU	Result or Strategy
Sayward	The holder(s) of the FSP will not carry out or authorize the harvest of timber or construction of new roads within areas identified as spring forage areas[1] adjacent to UWR for Deer as identified on the Sayward Landscape Unit map, titled Biodiversity and Wildlife if such harvesting will result in >25% of each forage area to be younger than 20 years old at any point in time.

- ***OBJECTIVE 4***

Manage stand structure and provide hiding cover for elk in the Elk Visual Cover Areas as identified on the attached Sayward Landscape Unit map, titled Biodiversity and Wildlife, by:

- *Maintaining at least 50% of the forested area of each Elk Visual Cover Area at greater than 5 metres in height; and,*
- *Prohibiting further harvesting adjacent to the major riparian feature (swamp, lake or stream) within the Elk Visual Cover Areas identified on the Sayward Landscape Unit map, titled Biodiversity and Wildlife, until the forest on the opposite side of the riparian feature exceeds the 5 metre height requirement for a lateral distance of 100m from the riparian feature.*

FDU	Result or Strategy
Sayward	1. The holder(s) of the FSP will not carry out or authorize the harvest of timber or construction of new roads within areas identified as Elk Visual Cover areas on the Sayward Landscape Unit map titled Biodiversity and Wildlife, if such harvesting will result in >50% of the forested area in each Elk Visual Cover area to be <5 meters in height. 2. The holder(s) of the FSP will not carry out or authorize the harvest of timber or construction of new roads adjacent to the major riparian feature (swamp, lake stream) within an area identified as an Elk Visual Cover Area on the Sayward Landscape Unit map titled Biodiversity and Wildlife, until the forest on the opposite side of the riparian feature exceeds the 5 meter height requirement for a lateral distance of 100m from the riparian feature.

- ***OBJECTIVE 5***

To manage stand structure and protect Critical Stream Reaches, as shown on the Sayward Landscape Unit map, titled Lakes Classification, and Small Spawning and Rearing Streams (S4) by:

- *Retaining all windfirm trees with roots embedded in the streambank; and*
- *For S4 streams, retaining 50% of the stems, representative of species, age and size, within 10m of the channel.*

[1] spring forage areas are aggregations of stands located within 2 km of each Ungulate Winter Range/deer. These stands are characterized by slopes ranging from 40 to 100% and having an aspect of exposure from 90 through 270 degrees. This definition is consistent with Objective 3 of the Sayward Landscape Unit Plan. Spring forage areas that meet the criteria outlined in the Sayward Landscape Unit Plan have been delineated and mapped on the Sayward Landscape Unit Spring Forage Map that is included in the background document.

FDU	Result or Strategy
Sayward	1. The holder(s) of the FSP will not carry out or authorize the harvest of windfirm trees with roots embedded in the streambank of small spawning and rearing streams (S4) and critical stream reaches as identified on the Sayward Landscape Unit map, titled Lakes Classification. 2. Within each: a) Timber Sales License gross area, or b) cutting permit gross area the holder(s) of the FSP will retain, for S4 streams, 50% of the stems, representative of species, age and size, within 10 m of the channel, except where: c) maintenance of 50% of stems within 10m of the channel is expected to be detrimental to the stream due to forest health or other concerns provided that: i) it is documented in a written rationale, prepared by a qualified professional, that considers the Factors set out in Schedule 1 of the FPPR.

- ***OBJECTIVE 6***

To establish a patch size objective and pursue enhanced timber harvesting opportunities, within areas not subject to integrated resource management (i.e., ungulate winter ranges, elk hiding cover areas, old growth management areas, recreation resource units, visually sensitive landscapes, recreation constraint areas, lakeshore management zones, and designated community watersheds) and as shown as Non-constraint Areas on the Sayward Landscape Unit map titled, Non-constraint Areas, by allowing cutblocks up to, but not exceeding 80 ha in size.

FDU	Result or Strategy
Sayward	1. Within areas that are not subject to integrated resource management[2], the holder(s) of the FSP may carry out or authorize the harvest of cutblocks with a net area to be reforested up to 80 ha.

5.1.2 Order Establishing Provincial Non-Spatial Old Growth Objectives

The Order Establishing Non-spatial Old Growth Objectives (effective June 30, 2004) (the Order) clarifies the amount of area available for timber harvesting. This Order supplements, but does not replace FPPR s. 9.

FDU	**Result or Strategy**
Salmon, Johnstone	1. Where OGMA are established through the Landscape Unit planning process, the holder(s) of the FSP in accordance with the Order establishing higher Level Plan Objectives for the Landscape unit will: a) Maintain or recruit old growth forest attributes within OGMAs and b) Authorize or carry out road construction or timber harvesting or other such operations within OGMAs in accordance with direction in the objectives for the landscape unit plan; and

[2] areas defined as subject to integrated resource management are constrained areas as shown on the Sayward Landscape Unit map titled "non-constraint Areas" and include ungulate winter ranges, elk hiding cover areas, old growth management areas, recreation resource units, visually sensitive landscapes, recreation constraint areas, lakeshore management zones and designated community watersheds.

FDU	Result or Strategy
	c) May authorize or carry out road construction or timber harvesting within OGMAs consistent with Administrative Adjustments, Amendments, and Operational Procedures for Old Growth Management Areas - ILMB Coast Region, dated August 13, 2010.
Kashutl, Kaouk, Artlish, Tahsish, Tahsis, Tlupana, Gold, Burman, Upper Campbell Simms	2. In accordance with the Implementation Policy, the timber sales manager may identify draft old growth management areas (OGMAs). Where draft OGMAs are identified, the timber sales manager in accordance with the written notice specifying that the draft OGMAs meet the intent of the Order, will: a) Maintain or recruit old growth forest attributes within draft OGMAs and b) Will authorize or carry out road construction or timber harvesting or other such operations within draft OGMAs in accordance with direction in the written notice specifying that draft OGMAs meet the intent of the non-spatial Order for the landscape unit and c) Authorize or carry out road construction where draft OGMAs overlap areas of road construction or timber harvesting to the extent that replacement areas are agreed upon with the agency responsible for the written notice. 3. In addition to subsection (2), where there are no draft OGMAs, the timber sales manager, in concert with holders of major licences operating in the same FDU, will a) not carry out or authorize timber harvesting or road construction in areas of old forest within the non-contributing landbase in that landscape unit, to the extent necessary to meet the specified retention targets, and b) if the amount of old forest in the non-contributing landbase is insufficient to meet the specified retention target, determine if the identified shortfall can be achieved in the old forest in the timber harvesting landbase and in the mature forest in the non-contributing landbase and (i) not carry out or authorize timber harvesting or road construction in areas of mature forest assessed to have old forest structure in the non-contributing landbase; and/or (ii) not carry out or authorize timber harvesting or road construction in areas of old forest within the timber harvesting landbase to the extent necessary to meet the specified retention targets.

5.1.3 Vancouver Island Land Use Plan Higher Level Plan Order

The applicable Higher Level Plan Order Objectives for the Special Management Zones (SMZs) and Enhanced Forestry Zones (EFZs) included in this FSP are listed in the following tables and described below and are shown on the FSP maps.

Table 2: VILUP Special Management Zones

Special Management Zone	Applicable HLP Objective	FDU
SMZ 5 South Brooks-Bunsby	1, 2	Kashutl
SMZ 7 Johnstone Strait	1, 2	Johnstone
SMZ 8 Tsitika River	1, 2, 4, 5	Johnstone
SMZ 11 Schoen-Strathcona	1, 2, 4, 5	Gold
SMZ 10 Pinder-Atluck	1, 2,	Tahsish

Table 3: VILUP Resource Management Zones (Enhanced and General)

Resource Management Zone	Applicable HLP Objective	FDU
RMZ 14 Kashutl	15, 16	Kashutl
EFZ 15 Tahsish	7, 9, 9.1 *	Tahsish
RMZ 17 Artlish-Kaouk	15,16	Artlish and Kaouk
EFZ 24 Burman	7, 9, 9.1 *	Burman
EFZ 27 Naka	7, 9, 9.1*	Johnstone
EFZ 28 Adam/Eve	7, 9, 9.1*, 15, 16	Johnstone
EFZ 30 Salmon	7, 9, 9.1*,	Salmon

* Objectives 7, 8, 9, 9.1 apply save and except for the parts of those zones, which are designated as community watersheds as defined in FPC s. 41(8).

➢ HLP Order Objective 1(a)

1. Sustain forest ecosystem structure and function in SMZs, by:

(a) Creating or maintaining stand structures and forest attributes associated with mature[7] and old[8] forests subject to the following:

i. the target for mature seral forest should range between one quarter to one third of the forested area of each SMZ[9]; and

ii. in the SMZs where the area of mature forest is currently less than the mature target range referred to in (i) above, the target amount of mature forest must be in place within 50 years.

FDU	Result or Strategy
Kashutl Johnstone Gold Tahsish	1. The holder(s) of the FSP will not carry out or authorize the harvesting of mature seral forest; a) within the designated South Brooks-Bunsby SMZ that would result in the amount of mature seral stage forest to fall below 25%. b) within the designated Johnstone Strait SMZ that would result in the amount of mature seral stage forest to fall below 25%. c) within the designated Tsitika River SMZ that would result in the amount of mature seral stage forest to fall below 25%. d) within the designated Schoen-Strathcona SMZ that would result in the amount of mature seral stage forest to fall below 25%.

➢ HLP Order Objective 1(b)

[7] The mature seral forest is defined as generally 80 to 120 years old or older, depending on species and site conditions. The structure of mature seral forests generally includes canopies that vary vertically or horizontally, or both. The age and structure of the mature seral stage will vary significantly by forest type and from one biogeoclimatic zone to another.

[8] The old seral forest is defined as generally greater than 250 years old, containing live and dead (downed and standing) trees of various sixes, including large diameter trees, and of various tree species, including broad-leaved trees. The structure of old seral forest varies significantly by forest type and from one biogeoclimatic zone to another.

[9] Mature seral targets will be established through landscape unit planning. See transition provisions under III.

1. Sustain forest ecosystem structure and function in SMZs, by:

(b) retaining, within cutblocks[10], structural forest attributes and elements with important biodiversity functions[11].

FDU	Result or Strategy
Kashutl, Johnstone Gold Tahsish	1. In designated SMZs 5, 7, 8, 10, 11, the holder(s) of the FSP will: a) retain, within cutblocks, structural forest attributes and elements with important biodiversity functions[11] .

- **HLP Order Objective 1(c) and 2**

1. Sustain forest ecosystem structure and function in SMZs by:

(c) Applying a variety of silvicultural systems, patch sizes and patch shapes across the zone, subject to a maximum cutblock size of 5 ha if clearcut, clearcut with reserves or seed tree silvicultural systems are applied, and 40 ha if shelterwood, selection or retention silvicultural systems are applied[12].

Despite subsection 1(c) above, cutblocks larger than 5 or 40 ha as the case may be, may be approved if harvesting is being carried out to recover timber that was damaged by fire, insects, wind or other similar events and wherever possible, the cutblock incorporates structural characteristics of natural disturbances.

FDU	Result or Strategy
Kashutl Johnstone Gold Tahsish	1. In designated SMZs 5, 7, 8, 10, and 11, the holder(s) of the FSP will: a) apply a variety of silviculture systems, patch sizes and patch shapes across the SMZ that are: i) subject to a maximum Net Area to be Reforested (NAR) of 5 ha if clearcut, clearcut with reserves, or seed tree silvicultural systems are applied, or ii) subject to a maximum NAR of 40 ha if shelterwood, selection, or retention silvicultural systems are applied. b) carry out forest practices only if the forest practices are consistent with the design for the cutblock referred to in paragraph a) of this strategy. 2. Despite subsection 1 of this result or strategy, the NAR for cutblocks within designated SMZs 5, 7, 8, and 11 may exceed the 5 ha or 40 ha limit as per s. 1a) and 1b) of this strategy, provided that: a) harvesting is being carried out to recover timber that was damaged by fire, insects, wind or other similar events, and b) the cutblock design incorporates structural characteristics of natural disturbances, where safe, practicable, and site conditions permit.

[10] Within cutblocks: generally means non-contiguous with cutblock boundaries.
[11] This includes, but is not limited to snags, wildlife trees, downed logs.
[12] Maximum cutblock sizes refer to net are to be reforested.

➢ HLP Order Objectives 4 and 5

4. Maintain late-successional habitat elements and attributes of biodiversity[13] in forested ecosystems with emphasis on regionally rare and underrepresented ecosystems, by retaining old seral forest at the site series/surrogate level of representation[14].

5. Retain late-successional habitat elements and attributes of biodiversity in patches of variable size.

FDU	Result or Strategy
Gold Johnstone	1. Within the designated SMZs 8 and 11, the holder(s) of the FSP will: a) design cutblocks that retain, within or adjacent to the cutblocks, late successional habitat elements and attributes of biodiversity[14] in i) wildlife tree patches; ii) riparian management areas; and iii) other areas reserved from harvesting that are of various sizes and which have site series representative of the site series associated with the areas to be harvested and are within 250 m of the cutblock.

➢ HLP Order Objective 7

7. To increase the short-term availability of timber,

(a) a cutblock may be larger than 40 ha pursuant to section 11(2)(a) of the OPR; and
(b) pursuant to section 68(4) of the OPR, a cutblock is greened-up if it is adequately stocked and the average height of those trees that are
(i) the tallest tree in each 0.01 ha plot included in a representative sample, and
(ii) a commercially valuable species or other species acceptable to the district manager
is at least 1.3 meters;

unless the district manager determines that a cutblock referred to under (a) or (b) would significantly impact specific hydrological, wildlife, biodiversity, scenic or recreation values.

FDU	Result or Strategy
Tahsish Burman Johnstone Salmon	1. Within the Tahsish, Burman, Naka, Adam/Eve, and Salmon EFZs, save and except the parts of those zones which are designated as community watersheds, the holder(s) of the FSP may: a) carry out or authorize the harvest of blocks that exceed 40 ha regardless of silviculture system applied, and b) assess a cutblock as greened-up if it is adequately stocked and the average height of those trees that are: i) the tallest tree in each 0.01 ha plot included in a representative sample, and

[13] This includes, but is not limited to: large diameter (>60 cm) live, decaying and dead standing trees (providing nest and cavity sites); downed wood, including large diameter pieces (50 to 150 cm); deciduous broad-leaved trees, both in riparian and upland areas.
[14] The level of representation of old seral forest will be applied through landscape unit planning.

	ii) a commercially valuable species or other species acceptable is at least 1.3 meters. 2. For the purposes of this strategy, in determining the size of a proposed cutblock in the Tahsish, Burman, Naka, Adam/Eve, and Salmon, EFZs, the non-greened up portion of an existing cutblock adjacent to a cutblock proposed for harvest will be considered part of the NAR. 3. In order to avoid or mitigate significant impacts to specific hydrological, wildlife, biodiversity, scenic or recreation values, cutblocks described in subsection 1 will be consistent with: a) hydrological values by following the results/strategies for HLP objective 8, community watersheds and fisheries sensitive watersheds, and b) wildlife values by following the results/strategies in Section 5.2.2, for wildlife, and Section 5.4.3 for ungulate winter ranges and c) wildlife and biodiversity values by following the results/strategies in Section 5.2.3 for water, fish, wildlife and biodiversity within riparian areas, and d) wildlife and biodiversity values by following the results/strategies in Section 5.2.5 for wildlife and biodiversity, and e) scenic values by following the results/strategies in Section 5.3.2 for visual quality and f) recreation values by following FPPR S. 70.

- **HLP Order Objective 8**

8. Avoid or mitigate adverse hydrological impacts, which may result from the practices referred to in objective 7, in watersheds with significant watershed sensitivity and significant fisheries values, as determined by the district manager and designated environment official.

FDU	Result or Strategy
Tahsish Burman Johnstone Salmon Tahsis Tlupana Kleeptee	1. For cutblocks that exceed 40 ha that are within a watershed determined by the district manager and designated environment official to have significant watershed sensitivity and significant fisheries values, within the Tahsish, Burman, Naka, Adam/Eve, Salmon, Tahsis, Tlupana, and Kleeptee EFZs the holder(s) of the FSP: a) will not carry out or authorize the harvest of timber if doing so would result in i) the ECA to be within 5% of a previously established ECA threshold for the fisheries sensitive portion of the watershed, ii) the ECA to greater than a 30% ECA threshold where there are no established ECA thresholds, or iii) cumulative hydrological effects resulting in a material adverse impact on the watershed.

➢ HLP Order Objectives 9 and 9.1

9. When proposing the species composition for the purposes of OPR section 39(3)(o), a person may, pursuant to OPR section 41, select a single species that is ecologically suited to the area, if a mix of species was present on the area before the timber was harvested.

9.1. The area that may be subject to selection of a single species pursuant to objective 9 is limited to no more than 20 percent of the forested area of any variant within a given EFZ.

FDU	Result or Strategy
Tahsish Burman Johnstone Salmon	1. Within the EFZ 15,24, 27, 28, or 30, the holder(s) of the FSP may reforest cutblocks with a single species that is ecologically suited to an area, if a mix of species was present on the area before the timber was harvested, subject to subsection 2. 2. The amount of area subject to selection of single species is limited to no more than 20% of the forest area of any variant within a given EFZ.

➢ HLP Order Objective 15 and 16

15. Retain old growth forests to meet old seral targets and marbled murrelet habitat requirements in the non-contributing landbase to the fullest extent possible.

16. Beyond retention in the non-contributing land base, retain old forests in the timber harvesting land base, up to the full target amount, if the district manager and the designated environmental official determine that such retention is required to maintain critical marbled murrelet habitat.

FDU	Result or Strategy
EFZ 28 (Johnstone) RMZ 14 (Kashutl)	1. Old forest retention objectives for EFZ 28 and RMZ 14 will be managed as per the result/strategy for the Order Establishing Provincial Non-Spatial Old Growth Objectives in S. 5.1.2 of this FSP. 2. Marbled Murrelet habitat requirements as per Objective 15 will be managed through s. 5.2.2 of this FSP (Wildlife).

5.2 Objectives prescribed under FRPA s. 149

5.2.1 Soils (FPPR s. 5)

The objective set by government for soils is, without unduly reducing the supply of timber from British Columbia's forests, to conserve the productivity and the hydrological function of soils.

The holder(s) of the FSP will undertake to comply with FPPR s. 35 and 36. In accordance with FPPR s. 12.1(1) and s. 12.1(5), the holder(s) of the FSP are exempt from the requirement to specify intended results and strategies set out in FPPR s. 5.

5.2.2 Wildlife (FPPR s. 7)

(1) The objective set by government for wildlife is, without unduly reducing the supply of timber from British Columbia's forests, to conserve sufficient wildlife habitat in terms of amount of area, distribution of areas and attributes of those areas, for
a) the survival of species at risk,
b) the survival of regionally important wildlife, and
c) the winter survival of specified ungulate species.

(2) A person required to prepare a forest stewardship plan must specify a result or a strategy in respect of the objective stated under subsection (1) only if the minister responsible for the Wildlife Act gives notice to the person of the applicable

a) species referred to in subsection (1), and

b) indicators of the amount, distribution and attributes of wildlife habitat described in subsection (1).

(3) If satisfied that the objective set out in subsection (1) is addressed, in whole or in part, by an objective in relation to a wildlife a habitat area or an ungulate winter range, a general wildlife measure, or a wildlife habitat feature, the minister responsible for the Wildlife Act must exempt a person from the obligation to specify a result or strategy in relation to the objective set out in subsection (1) to the extent that the objective is already addressed.

(4) On or after December 31, 2004, a notice described in subsection (2) must be given at least 4 months before the forest stewardship plan is submitted for approval.

Licensees operating within the CRFD are exempt from the obligation of preparing a result or strategy in relation to the objective set out in FPPR s. 7(1) for the Queen Charlotte Goshawk as noted in the Order establishing WHA 1-085 to 1-088 and 1-090 to 1-096 dated December 1, 2004.

Ungulate Winter Range #U1-014 and associated general wildlife measures were established on December 14, 2004 under GAR s. 9(2) and 12(1). The Order was amended on January 30, 2006. The Order establishing UWR #U1-014 provides an exemption from the obligation to prepare result or strategies in relation to the objective for the winter survival of ungulates in TFL 19 as per FPPR s. 7(3).

Ungulate Winter Range #U1-005 and associated general wildlife measures were established on July 20, 2006 under GAR s. 9(2) and 12(1). The Order establishing UWR #U1-005 provides an exemption from the obligation to prepare result or strategies in relation to the objective for the winter survival of ungulates in the Strathcona TSA as per FPPR s. 7(3).

FDU	Species	Result or Strategy
All FDUs	Marbled Murrelet *(Brachyramphus marmoratus)*	1. Within areas to which the Notice for the Campbell River Forest District (dated July 7, 2004) established under s. 7(2) of the FPPR applies, the holder(s) of the FSP will not carry out or authorize the harvest of timber within Marbled Murrelet habitat as identified through the following process: a) Where a detailed survey (as described in *Standard Methods for Identifying Marbled Murrelet Habitat in British Columbia Using Air Photo Interpretation and Low-level Aerial Survey whereby* suitable nesting habitat is defined as Class 1, 2 or 3 Marbled Murrelet habitat), has been conducted by a qualified

FDU	Species	Result or Strategy
		professional i) An amount equal to the amount of suitable nesting habitat in the non-contributing land base in the FDU's in the FSP at the time the Notice was issued, and ii) up to a maximum net mature timber harvesting land base impact of 595 ha, or b) Where a detailed survey has not been conducted (suitable nesting habitat is defined as age class 8 or 9 that is height class 4 or greater.): i) An amount equal to the amount of suitable nesting habitat in the non-contributing land base in the FDU's in the FSP at the time the Notice was issued, and ii) 595 ha of suitable nesting habitat in the timber harvesting land base; and 3. For the purpose of this result/strategy, "non-contributing land base" is as described in the Timber Supply Review: Strathcona Timber Supply Area" dated January 1, 2000, Timber Supply Review for TFLs 19, 25 and 39 dated August 1, December 30 and July 1, 1996.

FDU	Species	Result or Strategy
All	Red-legged Frog *(Rana aurora)*	1. The holder(s) of the FSP will not carry out or authorize road construction or cutblock harvesting as per subsection 2 of this strategy. 2. When suitable habitat is identified, area(s) will be delineated that meets the following criteria: a) Amount: to a maximum of 23 ha of which no more than 14 ha will be in the mature THLB; and b) Distribution: The suitable habitat within the range of the species that is presently occupied by the species as described in the accounts and measures of IWMS 2004; and c) Attributes: exhibits attributes as described in the Notice.

FDU	Species	Result or Strategy
All	Keen's Long–eared Myotis *(Myotis keenii)*	1. The holder(s) of the FSP will not carry out or authorize road construction or cutblock harvesting as per subsection 2 of this strategy. 2. When suitable habitat is identified, area(s) will be delineated that meets the following criteria: a) Amount: to a maximum of 40 ha of which no more than 30 ha will be in the mature THLB; and b) Distribution: The suitable habitat within the range of the species that is presently occupied by the species as described in the accounts and measures of IWMS 2004; and c) Attributes: exhibits attributes as described in the Notice.

FDU	Species	Result or Strategy

FDU	Species	Result or Strategy
All	Great Blue Heron *(Ardea herodias fannini)*	1. The holder(s) of the FSP will not carry out or authorize road construction or cutblock harvesting as per subsection 2 of this strategy. 2. When suitable habitat is identified, area will be delineated that meets the following criteria: a) Amount: to a maximum of 72 ha of which no more than 11 ha will be in the mature THLB; and b) Distribution: The suitable habitat within the range of the species that is presently occupied by the species as described in the accounts and measures of IWMS 2004; and c) Attributes: exhibits attributes as described in the Notice.

5.2.3 Water, Fish, Wildlife and Biodiversity within Riparian Areas (FPPR s. 8)

The objective set by government for water, fish, wildlife and biodiversity within riparian areas is, without unduly reducing the supply of timber from British Columbia's forests, to conserve, at the landscape level, the water quality, fish habitat, wildlife habitat and biodiversity associated with those riparian areas.

- **Stream, Lake and Wetland Riparian Classes (FPPR S. 47, 48, and 49)**

FDU	Result or Strategy
All	1. For areas of primary forest activity authorized or carried out by the holder(s) of the FSP, the width of the riparian management area, riparian reserve zone and riparian management zone will be: a) As specified in FPPR Sections 47(4) to (6), 48(3) to (5) and 49(2) to (3), or b) As specified in a site plan prepared prior to commencement of the primary forest activity i) Any increase or decrease in width from (a) above is specified in a written rationale signed by a qualified professional, prior to the commencement of the primary forest activity, and ii) Any increase or decrease in riparian reserve would maintain or increase the effectiveness and/or functioning of the riparian reserve, based on one or more of the following circumstances: (1) windthrow hazard and consequence, (2) sensitive stream protection, (3) environmental sensitivity such as terrain stability class 4 or 5, (4) topography, or (5) worker safety, and will be in accordance with the written rationale specified in (i) consistent with the Factors in Schedule 1 S. 2 of the FPPR.

- **Restrictions in Riparian Management Areas, Riparian Reserve Zones and Riparian Management Zones (FPPR s. 50, 51 and 52)**

FDU	Result or Strategy
All	1. The holder(s) of the FSP will adopt FPPR s. 50, 51 and 52(2) as those sections were on the date of submission of this FSP as a result or strategy.

➢ Retention in a Riparian Management Zone (FPPR S. 12(3))

FDU	Result or Strategy
All	1. If the holder(s) of the FSP authorizes or carries out a cutblock harvesting in a riparian management zone, the level of retention within the riparian management zone will : a) reflect the factors in FPPR Schedule 1 s.2; and b) be specified by a qualified professional in a written rationale, prepared prior to commencement of primary forest activity.

5.2.4 Community Watersheds (FPPR s. 8.2)

Objectives set by government for water in community watersheds:

*In this section, "**community watershed**" means a community watershed*
(a) That is continued under section 180(e) of the Act, and
(b) for which a water quality objective has not been
(i) continued under section 181 of the Act, or
(ii) established under the Government actions Regulation.

The objective set by government for water being diverted for human consumption though a licensed waterworks in a community watershed is to prevent to the extent described in subsection (3) the cumulative hydrological effects of primary forest activities within the community watershed from resulting in

(a) a material adverse impact on the quantity of water or the timing of the flow of the water from the waterworks, or

(b) the water from the waterworks having a material adverse impact on human health that cannot be addressed by water treatment required under
(i) an enactment, or
(ii) the licence pertaining to the waterworks.

The objective set by government under subsection (2) applies only to the extent that it does not unduly reduce the supply of timber from British Columbia's forests.

FDU	Result or Strategy
Sayward	1. When carrying out or authorizing timber harvesting within the area designated as the John Hart Lake Community Watershed, the holder(s) of the FSP will undertake to comply with FPPR s. 59, 60, 61 as those sections were on the date this FSP was submitted for approval.

5.2.5 Wildlife and Biodiversity (FPPR s. 9 and 9.1)

➢ Landscape Level (FPPR S. 9)

The objective set by government for wildlife and biodiversity at the landscape level is, without unduly reducing the supply of timber from British Columbia's forests and to the extent practicable, to design areas on which timber harvesting is to be carried out that resemble, both spatially and temporally, the patterns of natural disturbance that occur within the landscape.

FDU	Result or Strategy
All FDUs	1. The holder(s) of the FSP will undertake to comply with FPPR s. 64 and 65 subject to subsection 2 or 3 of this result/strategy. 2. Cutblock size may exceed 40 ha within the Sayward FDU if timber harvesting operations are carried out in accordance with the result/strategy for Objective 6 of the Sayward Landscape Unit plan (FSP s. 5.1.1.1). 3. Cutblock size may exceed 40 ha within the areas designated as EFZ 15, 24, 27, 28, or 30 if timber harvesting operations are carried out in accordance with the result/strategy for Objective 7 of the VILUP (FSP s. 5.1.3).

- **Stand Level (FPPR s. 9.1)**

The objective set by government for wildlife and biodiversity at the stand level is, without unduly reducing the supply of timber from British Columbia's forests, to retain wildlife trees.

FDU	Result or Strategy
All	1. The holder(s) of the FSP will undertake to comply with FPPR s. 66 and 67 as those sections were on the date of submission of this FSP, unless cutblock harvesting is being carried out consistent with legally established wildlife tree retention targets for landscape units.

5.2.6 Cultural Heritage Resources (FPPR s. 10)

The objective set by government for cultural heritage resources is to conserve, or, if necessary, protect cultural heritage resources that are

(a) the focus of a traditional use by an aboriginal people that is of continuing importance to that people, and

(b) not regulated under the Heritage Conservation Act.

FDU	Result or Strategy
All	1. The holder(s) of the FSP will periodically refer to applicable First Nations, areas identified for potential timber harvesting and road construction, if any, and request information respecting cultural heritage resources within the identified areas. All timber harvesting, road construction, or log dump construction activities will be referred to applicable First Nations prior to commencement of activities. 2. The holder(s) of the FSP will evaluate the nature and extent of a possible site-specific cultural heritage resource identified by First Nations under section 1 within areas of potential timber harvesting and road construction activities, including making reasonable efforts to share information or consult with the applicable First Nation in respect of the possible cultural heritage resource. 3. The holder(s) of the FSP, when designing a cutblock or road, will identify a) the portion of the area occupied by a cultural heritage resource,

FDU	Result or Strategy
	b) the nature of the cultural heritage resource, c) whether the cultural heritage resource is to be protected or conserved, and d) if the cultural heritage resource is to be conserved, what constraints, if any, are to apply to the forest practices carried out on the area. 4. For each cultural heritage resource that has been identified under subsection 3 for protection, the holder(s) of the FSP will carry out or authorize a person to carry out a forest practice only to the extent that the forest practice does not damage or render ineffective the cultural heritage resource. 5. For each cultural heritage resource that has been identified under subsection 3 for being conserved, the holder(s) of the FSP will carry out or authorize a person to carry out a forest practice only to the extent that the forest practice is consistent with the constraints, if any, specified in the design for the cutblock or road. 6. If, within a cutblock or road where the holder(s) of the FSP is carrying out or has authorized timber harvesting or road construction, a previously unidentified cultural heritage resource is encountered, the holder(s) of the FSP will: a) require operations within the cutblock or road to cease or be modified to the extent necessary to protect the cultural heritage resource, b) determine, i) the nature of the cultural heritage resource, ii) whether the cultural heritage resources is to be protected or conserved, and iii) if the cultural heritage resource is to be protected or conserved, what constraints, if any, are to apply to the forest practices carried out in the area. c) modify the design of the cutblock or road to conform with subsection 3, and d) authorize operations to resume within the cutblock or road to the extent that the operations are consistent with the modified design. 7. The holder(s) of the FSP recognizes that mature western redcedar and cypress located within the identified FDUs may be cultural heritage resources to the applicable First Nations and will ensure that a) western redcedar and cypress for traditional and cultural use will be conserved in an amount consistent with the amount of historic use. Amount of historic use is based upon FN requests or use over a representative time period as determined by MoFLNRO and each First Nation. Western redcedar and cypress for traditional and cultural use will, wherever possible, be identified or located in otherwise constrained areas including: riparian management zones, wildlife tree retention areas, ungulate winter ranges, wildlife habitat areas, riparian reserve zones and any other areas constrained for non timber values. b) where current FN requests for western red cedar and cypress for traditional and cultural use are confirmed by MoFLNRO, the holder(s) of the FSP will assist each FN to identify suitable trees. c) if requested by FN, the holder(s) of the FSP will help identify suitable areas for bark gathering in cutblocks prior to harvesting. d) western redcedar and cypress will be planted on areas referred to in section 29(1) of the Act in accordance with the approved stocking standards where determined to be appropriate by the prescribing forester. e) the holder(s) of the FSP will assist MoFLNRO where they are actively developing a strategy for and in the identification of western redcedar or cypress for traditional and cultural use.

5.3 Objectives Established under Government Actions Regulation (GAR)

5.3.1 Fisheries Sensitive Watersheds (FPPR s. 8.1)

The Artlish River was established as a Fisheries Sensitive Watershed on December 28, 2005 under GAR s. 14(1). Objectives for the Artlish Fisheries Sensitive Watershed were established on December 28, 2005 under GAR s. 14(2).

Objectives established for the Artlish Fisheries Sensitive Watershed are:

The objective is to provide, within the normal forest rotation, special management of the amount, timing and distribution of primary forest activities, in order to:

i) *conserve the natural hydrological conditions, natural stream bed dynamics and integrity of stream channels in the Fisheries Sensitive Watershed,*

ii) *conserve the quality, quantity and timing of water flows required by fish in the Fisheries Sensitive Watershed, and*

iii) *prevent the cumulative hydrological effects of primary forest activities in the Fisheries Sensitive Watershed from resulting in a material adverse impact on the fish habitat of the watershed.*

FDU	Result or Strategy
Artlish	1. Prior to carrying out or authorizing a primary forest activity within the area designated as the Artlish fisheries sensitive watershed, the holder(s) of the FSP, will: a) monitor the amount and timing of primary forest activities to confirm that watershed equivalent clearcut areas are: (i) less than or equal to 30%, (ii) between 30% and 40% with no significant indications of watershed instability as determined by a qualified professional, or (iii) greater than or equal to 40% only where supporting hydrological information as determined by a qualified professional, confirms that significant cumulative downstream impacts, in addition to known channel impacts related to historic forest development, are unlikely.

5.3.2 Visual Quality

Scenic Areas for the Campbell River Forest District were established by the District Manager on December 14, 2005 under GAR s. 7(1). Visual Quality Objectives for the Campbell River Forest District were established by the District Manager on December 14, 2005 under GAR s. 7(2).

Categories of visually altered forest landscape as defined in FPPR s. 1.1.

FDU	Result or Strategy
All	1. For the purposes of this result/strategy, a “significant public viewpoint”, as that term is used in the definition of “altered forest landscape” means a view point on water or land: a) where a large number of people traditionally congregate which may be a viewpoint in a park, highway pullout or rest stop, or city center; or b) included in the most current Visual Landscape Inventory; or, c) determined to be important by a qualified professional. 2. Road construction and/or timber harvesting carried out or authorized by the holder(s) of the

	FSP within scenic areas established on December 14, 2005 within the Campbell River Forest District, will be consistent with: a) the visual quality objectives as established by the District Manager on December 14, 2005; and b) the categories of visually altered forest landscape as defined in FPPR s. 1.1.

5.4 Objectives continued under FRPA S 181

5.4.1 Objectives Set for Lakeshore Management within the Sayward Landscape Unit

Riparian reserve zones and riparian management zones, within the Sayward Landscape Unit and associated objectives were established on February 26, 2003 as per FPC s. 64. These objectives are continued under FRPA s. 181.

Riparian Reserve Zones:

To manage for fisheries values within those areas noted as riparian reserve zones as shown on the Sayward Landscape Unit map, titled Lakeshore Management by:

- *Prohibiting timber harvesting, including salvage, unless such activities occur within established recreation sites and/or trails and are complementary to the recreation setting and experience as determined by the Statutory Decision Maker; and*

- *Prohibiting road construction unless no other practicable option exists as determined by the Statutory Decision Maker.*

Riparian Management Zones:

To ensure that for a distance of 50 metres from the timbered edge surrounding the following lakes within the Sayward Landscape Unit: McIvor, Beaver, Comeback, Hemp, Lily, Little Mud, Lawnchair, Pocket, Reed, Sedge, Shadow, Smolt, Star, and Whistlepunk, that no more than 25% of the forested area be less than 5 metres in height.

FDU	Result or Strategy
Sayward	1. The holder(s) of the FSP will not carry out or authorize the harvesting of timber within the riparian reserve zones as shown on the Sayward Landscape Unit map titled, Lakeshore management, unless such activity occurs within established recreation sites and/or trails and are complementary to the recreation setting and experience as determined by the Statutory Decision Maker. 2. The holder(s) of the FSP will not carry out or authorize the construction of roads within the riparian reserve zones as shown on the Sayward Landscape Unit map titled, Lakeshore management unless no other practicable option exist as determined by the Statutory Decision Maker. 3. The holder(s) of the FSP will not carry out or authorize the harvesting of timber within 50 metres from the timbered edge surrounding the McIvor, Beaver, Comeback, Hemp, Lawnchair, Lily, Little Mud, Pocket, Reed, Sedge, Shadow, Smolt, Star, and Whistlepunk Lakes unless at least 75% of the forested area is greater than 5 metres in height.

5.4.2 Recreation Trail Objective – Sayward Landscape Unit

A recreation trail objective for the Sayward Landscape Unit was established on July 1, 2003 as per FPC s. 6. These objectives are continued under FRPA s. 181.

Objective 1:
Harvesting and/or road building within 10 metres of the running surface of existing trails within the Snowden Forest, as shown on the Sayward Landscape Unit Map titled, Recreation Constraints, requires the prior approval of the Designated Statutory Decision Maker.

FDU	Result or Strategy
Sayward	1. The holder(s) of the FSP will not carry out or authorize road construction or timber harvesting within 10 metres of the running surface of existing trails within the Snowden Forest as shown on the Sayward Landscape Unit Map titled, Recreation Constraints, without prior approval from the Designated Statutory Decision Maker.

5.4.3 Ungulate Winter Range #U1-004

Ungulate Winter Range #U1-004 and associated objectives was established on December 17, 2003 under OSPR s. 69(1)(a) and (b). The Order was amended on September 9, 2005.

Objective 1
Road construction is not to occur within the designated ungulate winter ranges unless there is no other practicable option, the quality of the winter ranges will not be significantly affected and a variance is approved by the MWLAP Statutory Decision Maker or designate.

Objective 2
Harvesting is not to occur within the designated ungulate winter ranges unless a variance is approved by the MWLAP Statutory Decision Maker or designate. A variance would only normally be considered for the purposes of enhancing the quality of the winter range.

Objective 3
Salvage harvesting is not to occur within the designated ungulate winter ranges, unless a variance is approved by the MWLAP Statutory Decision Maker or designate.

Objective 4

Road maintenance, road deactivation, felling of danger trees or brushing and clearing on existing roads within the UWR is allowed. Where required to address worker safety, felling of danger trees, felling for guy line anchors, felling of tail hold anchor trees within an UWR is allowed along adjacent cutblock boundaries. Any trees that must be felled within an UWR will be left onsite to provide coarse woody debris, unless the felled tree lies outside the UWR. The holder of TFL 39 Block 2 will ensure that UWR values are maintained and incorporated when addressing worker safety concerns.

FDU	Result or Strategy
Johnstone Salmon Sayward	1. The holder(s) of the FSP will not carry out or authorise the construction of new roads or the harvest of timber, including salvage, within the ungulate winter range U1-004 as established December 17, 2003: a) unless a variance is provided by the MoE; or b) as allowed by objective 4 of the Order. 2. This strategy applies to amendments made to UWR U1-004 subsequent to the date of the Order.

6. Stocking Standards

6.1 Situations or Circumstances that determine whether Free Growing is Assessed on a Block Basis or Across Blocks

FPPR s. 44(1) applies in all situations or circumstances under the FSP where a free growing stand is required to be established under FRPA s. 29.

6.2 Regeneration Date and Stocking Standards, Free Growing Height

The Stocking Standards specify the regeneration date, free growing height and stocking standards for the situations or circumstances where FPPR S. 44(1) applies.

6.3 Situations or Circumstances that Determine when FPPR S. 44(4) and the Standards Applicable Under FPPR S.16(4) Applies

If the timber sales manager carries out or authorizes harvesting of special forest products, intermediate cuts or commercial thinning from an area within the Strathcona Timber Supply Area, the stocking standards in Appendix 1 of this FSP will be maintained on the area for twelve months following the completion of the harvesting.

6.4 Stocking Standards and S. 197(5) of the FRPA

In accordance with S. 197(5) of the FRPA, the holder of this FSP may specify in a written notice to Government that stocking standards approved as part of the FSP apply to cutblocks harvested prior tot he commencement of this FSP by the Holder of the FSP.

7. Measures to Prevent the Introduction and Spread of Invasive Plants (FRPA s.47, FPPR s.17)

FRPA s. 47 requires that:

A person carrying out a forest practice or a range practice must carry out measures that are

(a) specified in the applicable operational plan, or

(b) authorized by the minister

to prevent the introduction or spread of prescribed species of invasive plants.

FPPR s. 17

For the purpose of section 47 [invasive plants] of the Act, a person who prepares a forest stewardship plan must specify measures in the plan to prevent the introduction or spread of species of plants that are invasive plants under the Invasive Plants Regulation, if the introduction or spread is likely to be the result of the person's forest practices.

FDU	Measure
All	1. In these measures **"applicable area"** means an area where a) it is likely that forest practices carried out or authorized by the holder(s) of the FSP will result in introduction or spread of invasive plants; b) there is a moderate to high risk invasive plants are likely to germinate on soil exposed that is a result of a person's forest practices under this FSP; c) it is reasonably expected that grass would grow on these exposed sites; d) it is reasonably foreseeable that revegetation with grass seed would materially reduce the likelihood of invasive plant germination.; and e) the holder(s) of the FSP has not deemed the area to an active surface area. **"preferred seed"** means seed with the following attributes: a) high sod-forming content, except in areas that are planted with tree seedlings; b) has been certified by the Canadian Seed Growers Association that the seed; i) meets Common #1 Forage Grade or better standards for varietal purity established by the Association for seed of that kind of species (Seeds Act, Seeds Regulation S. 2(1)); and ii) is of native origin. **"Priority invasive plants"** includes Gorse, Japanese Knotweed, Giant Knotweed, Scotch Broom, Purple Loosestrife, Yellow Iris. Additional priority invasive plants may be added to this list based on recommendations from the Coast Forest Region invasive plants specialist. 2. The holder(s) of the FSP will: a) distribute information to field team staff on priority invasive plants that exist or threaten to establish within the plan area, b) direct field team staff to report new incidences of priority invasive plants, c) update risk rating tables within 36 months of plan approval. 3. If the holder(s) of the FSP carries out or authorizes a forest practice in an applicable area the holder(s) of the FSP, within one year of completing the activity authorized in the timber sale licence, or cutting permit will: a) seed contiguous areas of exposed soil that exceed 0.1 ha giving preference to preferred seed that is: i) readily available, ii) comparable in cost to agronomic mixtures, and iii) comparable in effectiveness to agronomic mixtures; and

	4. If newly introduced priority invasive plants are detected that are likely the result of the Timber holder(s) of the FSP forest practices; the holder(s) of the FSP will work with government agencies to; a) develop an eradication or management plan; and b) implement the eradication or management plan.

8. Signatures of Persons Required to Prepare Plan

REGISTERED PROFESSIONAL FORESTER
PROVINCE OF BRITISH COLUMBIA
LAURA C CHESSOR
NO. 4005

RPF Signature: _____

Name: Laura Chessor R.P.F.

Position: Planning Forester, BC Timber Sales, Strait of Georgia Business Area

Date: Feb 7, 2012

Ka:'yu:'kt'h'/Che:k'tles7et'h' First Nation: Operating in FL A84558 within the Kashuti, Tahsish, Artlish, Kaouk FDU.

_____
Authorized Signatory of the holder of FL A84558
Therese Smith, Legislative Chief of the Ka:'yu:'kt'h'/Che:k'tles7et'h' First Nation

Feb. 8, 2012
Date

Timber Sales Manager Signature: _____

Name: Don Hudson

Position: Timber Sales Manager, BC Timber Sales, Strait of Georgia Business Area

Date: February 7, 2012

FEB-8-2012 01:28P FROM:KCFN TREATY 12502879778 TO:2502869490 P.2
Received: Feb 8 2012 02:55pm

APPENDIX 1 FSP Stocking Standards

8.1 Stocking Standards BC Timber Sales Strathcona FSP (Strait of Georgia Business Area)

ID	Silv Strat Ref	BEC			Preferred Species								Acceptable Species								Stocking (w/s)			MIN Inter Tree Dist.	Delay	Additional Standards/Comments
		Zone	SZ/ Variant	Site Series	1	Ht (min)	2	Ht (min)	3	Ht (min)	4	Ht (min)	1	Ht (min)	2	Ht (min)	3	Ht (min)	4	Ht (min)	Target P&A (sph)	Min P&A (sph)	Min P (sph)	(m)		
	Fdc 1	CWH	xm1 xm2	01,04	FDC	3							CW	1.5	PW	2.5					900	500	400	2	3	Pw comment applies.
	Fdc 2	CWH	xm1 xm2	05,07	FDC	4	CW	2	BG	3.5			PW	2.5							900	500	400	2	3	Pw and true firs comments apply.
	Fdc 4	CWH	xm1 xm2	03	FDC	2	PW	3.5					CW	1	PL	1.25					800	400	400	1.5	3	Pw comment applies
	Fdc 6	CWH	xm1 xm2	06	FDC	3	CW	1.5	HW	2			PW	2.5							900	500	400	2	6	Pw comment applies.
	Fdc 7	CWH	xm1 xm2	02	FDC	2	PL	1.25													400	200	200	1	3	
	Dr 1	CWH	xm1 xm2	01(f), 06	DR	10															900	600	600	2	2	Max density does not apply to deciduous management. Refer to Red Alder silv regime in backgrounder.
	Dr 2	CWH	xm1 xm2	05,07 08,13	DR	10							MB	10							900	600	600	2	2	Max density does not apply to deciduous management. Refer to Red Alder silv regime in backgrounder.
	Dr 3	CWH	xm1 xm2	12	DR	10															900	600	600	1	2	Max density does not apply, spacing is basic a basic reforestation obligation. Refer to Red Alder silv regime in backgrounder.
	Act 1	CWH	xm1 xm2	08,09 13,14	ACT	4															1200	900	900	2	2	Max density does not apply.
	Act 2	CWH	xm1 xm2	10	ACT	4															400	200	200	1	2	Max density does not apply.
	Act 3	CWH	xm1 xm2	15	ACT	4															900	600	600	1	2	Max density does not apply
	Mb1	CWH	xm1 xm2	10	MB	4															1400	1000	1000	1	2	Max density does not apply to deciduous management. Refer to bigleaf maple silv. regime in backgronder.
	RR1	CWH	xm1 xm2	01,04 05,07	CW	2	PW	3.5													900	500	400	2	3	Pw comment applies. No site prep option.
	RR2	CWH	xm1 xm2	01,04	CW	2	PW	3.5	FDC	3											900	500	400	2	3	Pw comment applies. Site prep option.
	RR3	CWH	xm1 xm2	05,07	CW	2	PW	3.5	FDC	4	BG	3.5									900	500	400	2	3	Pw and true fires comments apply. Site prep option.
	RR4	CWH	xm1 xm2	03	PW	3.5															800	400	400	1.5	3	Pw comment applies. No site prep, dry site option.
	RR5	CWH	xm1 xm2	06	CW	1.5							PW	2.5							900	500	400	1.5	6	Pw comment applies. No site prep, wet site option.

	08	CWH	xm1 xm2	08	BG	3.5	CW	2					SS	1.5							900	500	400	2	3	Bg may be accepted up to 50% of the MSS pa.
	11	CWH	xm1 xm2	11	PL	2.5							CW	1	PW	2.5					400	200	200	1	3	Pw comment applies.
	12	CWH	xm1 xm2	12	CW	1							HW	2	PW	2.5	SS	1.5			500	400	300	1	3	Pw comment applies.
	13	CWH	xm1 xm2	13	BG	3.5	CW	2					FDC	4	SS	1.5					800	400	400	1.5	3	Bg may be accepted up to 50% of the MSS pa. Acceptance of Fdc limited to elevated mounds.
	14	CWH	xm1 xm2	14	BG	3.5	CW	2					SS	1.5							800	400	400	1	3	Bg may be accepted up to 50% of the MSS pa.
	15	CWH	xm1 xm2	15	CW	2															500	300	300	1	3	
	CT1	CWH	xm1 xm2	01,05 07	FDC								HW		CW		PW				330	330	300			
	CT2	CWH	xm1 xm2	01,05 07	FDC								PW								330	330	300			
	CT3	CWH	xm1 xm2	01,05 07	FDC								HW		CW		PW				300	300	250			
	CT4	CWH	xm1 xm2	01,05 07	FDC		HW		CW				HW		CW		PW				400	400	350			
	Fdc1	CWH	xm2	01/04	FDC	3							CW	1.5	HW	2					900	500	400	2	3	
	Fdc2	CWH	xm2	05/07	FDC	4	CW	2	BG	3.5											900	500	400	2	3	
	Fdc3	CWH	xm2	03	FDC	2							PW	2.5	CW	1					800	400	400	1.5	3	Cw limited to less than 10% of target stocking.
	CwHw 4	CWH	xm2	06	CW	1.5	HW	2					FDC	3							900	500	400	2	6	Fdc acceptable on raised microsites only.
	Fdc 5(t)	CWH	xm2	05	FDC	4	CW	2	BG	3.5			PW	2.5	HW	2	BA	3.5			900	500	400	2	3	Pw and true fire comments apply.
	CwBg (t)	CWH	xm2	08/13 /14	CW	1.5	BG	3.5					BA	3.5							900	500	400	1.5	3	
	Fdc/ Hw (t)	CWH	xm2	01	FDC	3	HW	2					CW	1	PW	2.5					900	500	400	2	3	Pw and Hw comments apply.
	HwBa1	CWH	vm1	01	HW	3	BA	1.75	CW	1.5			FDC	3							900	500	400	2	6	Fdc acceptable on SSE to WSW aspects, roadside and rehabilitated temporary access structures with exposed soils.
	HwBa2	CWH	vm1	06	HW	3	BA	1.75	CW	1.5			SS	3							900	500	400	2	6	Ss comment applies
	CwHw 1	CWH	vm1	03	CW	1	HW	2					FDC	2							800	400	400	1.5	6	Fdc acceptable on SSE to WSW aspects, roadside and rehabilitated temporary access structures with exposed soils.
	CwHw 2	CWH	vm1	04	CW	1.5	HW	3					FDC	3	BA	1.75					900	500	400	2	3	Fdc acceptable on SSE to WSW aspects, roadside and rehabilitated temporary access structures with exposed soils.
	BaCw1	CWH	vm1	05	BA	1.75	CW	1.5					HW	3	FDC	3					900	500	400	2	3	Fdc acceptable on SSE to WSW aspects, roadside and rehabilitated temporary access structures with exposed soils.

	BaCw2	CWH	vm1	07/08 /09	BA	2.25	CW	2					HW	4	SS	4					900	500	400	2	3	Hw acceptable on well developed Mor humus with LFH > 10cm thick. Ss comment applies.
	CwSs	CWH	vm1	14	CW	1.5							HW	3	SS	3					800	400	400	1.5	3	All species on elevated microsites only. Ss comment applies.
	FdcHw	CWH	vm1	01/03	FDC	3	HW	3	CW	1.5			BA	1.75							900	500	400	2	3	SSE to WSW aspect.
	Coll 1	CWH	vm1	01/03	HW	2.5	CW	1	BA	1.75			FDC	2.5							600	300	300	1	6	Fdc acceptable on SSE to SSW aspects only. Ba is preferred on 01 sites only. Heavy colluvium where planting sites are limited and/or talus slopes.
	Coll 2	CWH	vm1	04/05 /06	HW	3	CW	1.5	BA	1.75			FDC	3							600	300	300	1	6	Fdc acceptable on SSE to SSW aspects in lower portion of variant only. Heavy colluvium where planting sites are limited and/or talus slopes.
	HwBa3	CWH	vm2	01/06	HW	2.5	BA	1.75	CW	1.5			YC	1.5	FDC	1..5					900	500	400	2	6	Yc is preferred in the upper portions of the variant and on north aspects, cool air drainage, cool air drainage areas or based on performance on site. Fdc comment applies.
	CwHw 3	CWH	vm2	03/04	CW	1	HW	1.75					YC	1	BA	1.5	FDC	1.5			800	400	400	1.5	6	Ba is limited to 04 sites only. Fdc on SSE to WSW aspects up to 750meteres in elevation.
	BaCw3	CWH	vm2	05	BA	1.75	CW	1.5					HW	2.5	YC	1.5	FDC	1.5			900	500	400	2	3	Yc is preferred in the upper portions of the variant and on north aspects, cool air drainage, cool air drainage areas or based on performance on site. Fdc comment applies.
	BaCw4	CWH	vm2	07/08	BA	2.25	CW	2					HW	3.5	YC	2	SS	4			900	500	400	2	3	Hw acceptable on well developed Mor humus with LFH > 10cm thick. Yc is preferred in the upper portions of the variant and on north aspects, cool air drainage areas or based on performance on site. SS limited to 20% target stocking due to weevil risk.
	CwYc1	CWH	vm2	09/11	CW	1	YC	1					HW	1.75							800	400	400	1.5	3	All species on elevated microsites only.
	Coll 3	CWH	vm2	01/03 /04	HW	1.75	CW	1	YC	1			FDC	1.5	BA	1.5					600	300	300	1	6	Fdc acceptable on SSE to SSW aspects in lower portion of variant only. Heavy colluvium where planting sites are limited and/or talus slopes.
	Coll 4	CWH	vm2	05/06	HW	2.5	CW	1.5	YC	1.5	BA	1.75									600	300	300	1	6	Heavy colluvium where planting sites are limited and/or talus slopes.
	CwHw 5	CWH	vh1	01	CW	1.5	HW	2					BA	1.75	SS	3					900	500	400	2	6	Ss limited to less than 20% of target stocking due to risk of weevil damage.
	CwHw 6	CWH	vh1	03	CW	1	HW	1.25					PL	1.25							800	400	400	1.5	6	
	BaCw5	CWH	vh1	04/05 /06/0 7/08	BA	2.25	CW	2					HW	1.75	SS	4					900	500	400	2	3	Ss limited to less than 20% of target stocking due to risk of weevil damage.
	CwYc2	CWH	vh1	11/13	CW	1							YC	1	SS	2	HW	1.25			800	400	400	1.5	3	Ss limited to less than 20% of target stocking due to risk of weevil damage. All species on raised microsites only.

		CWH	mm1	01	FDC	3	HW	2					CW	1.5							900	500	400	2	6	
		CWH	mm1	02	PL	1.25							FDC	2							800	400	400	1.5	6	
		CWH	mm1	03	FDC	2							CW	1							800	400	400	2	3	
		CWH	mm1	04	FDC	2							PW	2.5	CW	1					800	400	400	1.5	3	Pw comment applies.
		CWH	mm1	05	FDC	3	CW	1.5					PW	2.5							900	500	400	2	3	Pw comment applies.
		CWH	mm1	06	CW	1.5	HW	2					FDC	3							900	500	400	2	6	
		CWH	mm1	07	CW	2	FDC	4					HW	2.5	BA	1					900	500	400	2	3	
		CWH	mm1	08	BA	1	CW	2					SS	4							900	500	400	1.5	3	True firs comment applies. Ba may be accepted up to 50% of the Mss pa.
		CWH	mm1	09	CW	2							BA	1							900	500	400	1.5	3	
		CWH	mm1	11	PL	1.25							CW	1							400	200	200	1	3	
		CWH	mm1	12	CW	1															800	400	400	1.5	3	
	01	CWH	mm2	01	FDC	2.25	CW	1	YC	1	HW	1.25	HM	1	BA	0.75					900	500	400	2	6	Fdc is preferred only on steep southerly aspects, where local climate is warmer/drier than normal, and it's application is based on presence in the local area.
	01f	CWH	mm2	01	HM	1	HW	1.25	YC	1	CW	1	BA	0.75							900	500	400	2	6	Standard represents site type dominated by thick (>20cm) mor humus form and / or soils of the folisolic order.
	02	CWH	mm2	02	FDC	1.5	PL	1.25					CW	0.75							800	400	400	2	6	
	03	CWH	mm2	03	FDC	1.5	HW	1					CW	0.75	YC	0.75	HM	1			800	400	400	2	3	
	04	CWH	mm2	04	FDC	1.5							CW	0.75	YC	0.75	HW	1			900	500	400	2	3	
	05	CWH	mm2	05	FDC	2.25	YC	1	CW	1			BA	0.75	HM	1	HW	1			900	500	400	2	3	Fdc is considered preferred only on steep southerly aspects, and it's application is based on the presence in the local area.
	06	CWH	mm2	06	HW	1.25	YC	0.75	CW	0.75			BA	0.75	HM	1	FDC	2.25			900	500	400	2	6	
	07	CWH	mm2	07	HW	1	CW	1.25					BA	0.75	HM	0.75	YC	0.75			800	400	400	2	3	
	08	CWH	mm2	08	CW	1.25	YC	1.25					BA	1	FDC	3	HW	1.75			900	500	400	2	3	
	09	CWH	mm2	09	PL	1.25							YC	0.75							400	200	200	2	3	
	10	CWH	mm2	10	CW	0.75							YC	0.75							800	400	400	1.5	3	

	HmBa1	MH	mm1	01/03 /04	HM	1	BA	0.6	YC	1			SE	1							900	500	400	1.5	7	Limit Se to less than 20% of target stocking.
	BaYc1	MH	mm1	05/07	BA	0.6	YC	1					HM	1							900	500	400	1.5	4	Elevated microsites on 07 site series.
	HmYc 1	MH	mm1	02	HM	0.75	YC	0.75					BA	0.6	SE	0.75					800	400	400	1.5	4	Limit Se to less than 20% of target stocking.
	HmYc 2	MH	mm1	06	HM	0.75	YC	0.75					BA	0.6							800	400	400	1.5	7	

Reference Notes for Stocking Standards

This section sets out the stocking standards which will be applied in site plans throughout the term of the FSP. These stocking standards have all been previously approved in FDPs, with the exception of including Fdc as an acceptable species in the CWHvm2 01, 04, 05, and are otherwise presented without alteration in this text.

Stocking standards for deciduous species are considered experimental and are based on advice from scientific experts in the field of deciduous management. .An interim red alder silviculture regime is presented for reference purposes, and the stocking standards should be evaluated in it's context.

Tree Species

'Ba' is amabilis fir
'Bg' is grand fir
'Cw' is western red cedar
'Fdc is coastal douglas fir
'Hm' is mountain hemlock
'Hw' is western hemlock
'Pl' is lodgepole pine
'Pw' is white pine
'Ss' is sitka spruce
'Se' is engelmann spruce
'Yc' is yellow cedar

'Biogeoclimatic unit' or 'BGC classification' means the zone, subzone, variant and site series described in the most recent field guide published by the Ministry of Forests for the identification and interpretation of ecosystems, as applicable to a harvested area.

MIN' or 'Min' means minimum
'CT' means commercial thin
'Coll' means colluvium
't' means transition between BEC subzones. ie: CWH xm2 to CWH mm1

The above tables are to be used in conjunction with the following restrictions on acceptance of species and other conditions.

Additional Standards/Comments

1. True Firs

Due to the risk of future infestation by the Balsam woolly adelgid, true firs will not be managed in pure plantations. Except as noted in the tables, where listed as a preferred species, true firs will not contribute more than 30% towards the target-stocking standard (TSS).

2. Pine

Western white pine (Pw)

Western white pine is a highly productive species with the potential for application to a wide range of site series in the CWH xm. However, due to disease risks associated with Cronartium ribicola, this potential is severely limited. Even with intensive management, and genetically resistant stock, survival is at risk at any point in the rotation. The following outlines the application of Pw as a preferred and acceptable species:

Preferred species status – several root disease stocking standards identify Pw as a preferred species. This will apply to sites where, due to terrain constraints, site preparation treatments are not physically possible. On dry sites, Pw will be managed in pure stands with intensive management (pruning to a minimum height of 2 meters with no less than 30% residual live crown). The minimum free growing height has been modified to 3.5 meters to reflect this. Due to the survival risk even with pruning, the management intention will be to minimize the amount of area under pure western white pine management.

Acceptable Species Status - the intent is to establish a component and manage the risk of mortality. In this case branch pruning will not be a commitment, but may take place in conjunction with a stand pruning treatment, subject to the availability of funding.

3. Douglas Fir (Fdc)

Douglas fir is accepted or preferred on relatively warm, well-drained sites across the CWHvm1, and the lowest portions of the CWHvm2. Additional standards have been inserted into the table, where applicable, which restricts or allows the acceptance of Fdc (ie. Fdc is acceptable on SSE to WSW aspects and on roadside and other areas with disturbed soils).

The tables also include a Fdc/Hw regime that can be applied on CWHvm1 01/03 sites where conditions are suitable (ie. Well drained, south aspects, and mineral soil availability).

Phellinus weirii is a significant indigenous pest in Douglas-fir management. The goal of management efforts is to limit the incidence to natural endemically low levels.

Forest Level Assessment

At the forest level, local knowledge is drawn upon to identify areas where root disease is prevalent. Where deemed appropriate and cost effective, root disease surveys over large areas are completed. These surveys are then used to identify specific areas for potential forest health treatment.

Stand Level Assessment

Management of root diseases begins with recognition of above ground symptoms during pre-harvest reconnaissance. BCTS engineers, foresters and some of our contractors are trained to recognize root disease at the early stages of cutblock development. Ocular identification and incidence estimates at this stage trigger more detailed assessments if deemed necessary.

Site plans detail the management techniques for controlling root rot on a site-specific basis. The preferred option is to harvest, de-stump, and regenerate with coniferous species including Douglas-fir. Other options may include conversion to red alder or western white pine without de-stumping.

4. Sitka Spruce (Ss)

Sitka spruce leader weevil damage is a concern throughout the FSP area. This species is limited to a minor component of 10% of the target stocking standard. Sitka spruce must display a healthy leader and meet minimum height requirements to be accepted as a crop tree at free growing.

5. Yellow Cedar/Cypress (Yc)

Yellow Cedar/Cypress is a high valued species that can move from "acceptable" to "preferred" status depending on micro-climate and other factors. The tables indicate where and within which regimes it is possible to interchange between Western Red Cedar (Cw) and Yc.

6. Western Hemlock

The CWH xm2 within the Strathcona TSA represents the northern limit, and the wettest portion, of the variant. It also occurs in transition to the CWH mm1 and CWH vm1. Within this geographic area of the variant, western hemlock is highly productive both in pure stands as well as in mixtures with Douglas-fir.
Due to site characteristics such as thick forest floors or aspect, BCTS may exercise the option to manage natural Hw regeneration as a major component (as a preferred species). This is expected to occur predominately in conjunction with artificial regeneration of Douglas-fir. The standards tables reflect this option, and identify it with the suffix "t" (transition).

Hemlock dwarf mistletoe is a significant forest health concern because of it ability to spread from the overstory into canopy openings created by harvesting. Management efforts are directed to limiting this spread potential rather than to eradication. When indicated at the site plan level by the prescribing forester, the following techniques will be employed to limit the spread and /or reduce the incidence in the regenerating stand.

- Locating perimeter falling boundaries to include heavily infected trees within the cutblock, and designing retention patches or other reserves to exclude heavily infected trees,
- where existing stand structure permits it, selectively harvesting edges to remove infected trees,
- 3 meter knock down of advance, mistletoe-infected Hw regeneration,
- regeneration of alternative immune species within 20 meters of infected edges.

7. Management Strategies for Heavy Colluvium or Talus Slope sites.

The stocking tables include four separate regimes for sites that are typically difficult to regenerate due to accumulations of rock colluvium or talus slopes. The timber on these sites is often of high quality, and sufficient volumes to justify an economic logging chance. However, regenerating these sites is difficult due to limited plantable spots and/or a lack of suitable seedbed for natural regeneration. Stocking densities have been lowered accordingly to account for these conditions.

8. Broadleaf Management Strategy

The BCTS has pursued conversion of deciduous stands in the Strathcona TSA, and there is a deciduous forest licence applicable to the area. There are also virtually no immature stands on line for future opportunities. In recognition of this, BCTS may manage for the regeneration of broadleaf timber crops on a limited portion of the landbase, where the combination of economic and site factors make it a viable option up to a maximum of 20 ha/year.
Sites will be selected for their contribution to the achievement of the following objective(s):

- root disease amelioration
- addressing localized age class imbalances
- tree species diversity
- wildlife habitat
- visual resource management, as a component of total chance planning and /or visual rehabilitation.

Red alder will be the primary species under management, and a proposed sawlog silviculture regime is included. Trials with Bigleaf maple may be pursued to gain experience in its management on a very limited basis. Black

cottonwood will be rarely regenerated due to low market value and limited end product uses. Sites selected for red alder management will generally be moist to wet, nutrient medium to very rich. Its application on zonal sites, as listed in the Stocking Standards tables will be targeted at the fresh, nutrient poor to medium component of the series (4 / B – C), denoted as 01(f).

9. High Elevation Forestry

Regeneration difficulties are directly related to climatic exposure (wind and snow), depth of snow pack and short growing season within the Mountain Hemlock Zone. Minimum inter-tree spacing is reduced, as shown in the table, to account for natural clumpiness of regeneration in most cases. Micro-climatic factors such as aspect, presence of cold air drainage, exposure to wind, and elevation must be taken into consideration during cutblock planning. Decisions will be made on cutblock size and silviculture system for each development area such that regeneration objectives and specifically stocking standards can be met. The application of Englemann Spruce as a minor component must be used with caution as it is being extended beyond its normal range. However, some success has been demonstrated on other areas within the MHmm1 and CWHmm. It will only be used on a "trial basis", initially until local knowledge, success, and reliability can be realized.

10. Minimum Horizontal Inter-Tree Spacing

The Provincial stocking standard guidelines were developed on the assumption of a 2.0 meter minimum inter-tree spacing. In some cases the BCTS stocking standards vary this to a minimum value of less than 2.0 meters. Generally, this reduction is directed towards site series where management experience has shown this to be required. Typically this involves sites with one or more of the following characteristics:

- Sites dominated by colluvium, those occurring as mosaics with non productive rock (site series 02 / bedrock), and morainal sites with a high coarse fragment content (site series 03).
- Very moist to wet sites (site series 06 / 07) where irregularly spaced natural mounds are the most productive microsites, often occurring in mosaic with natural non productive
- Wet sites (site series 12) where irregularly spaced mounds are the only productive microsites.
- Roadside debris piles that do not represent a significant loss of productive site (i.e. are less than 50m2 ground surface area), or pose a stability concern or fire hazard will, as a general rule, will remain untreated. For ground base harvest systems in second growth stands, an attempt will be made to leave these small piles dispersed throughout the cutblock. Minimum stocking standards will be maintained in these areas with and intertree spacing of 1.0m around slash piles or heavy slash accumulations. For heavy road side slash accumulations, site preparation is the priority and will focus on rearranging the slash to achieve target stocking.

Note that these standards are considered a minimum in terms of a free growing sampling parameter. As such they will be applied only where site conditions dictate that a deviation from the provincial standard is required, and therefore should not be construed as a standard of management. The objective will be to manage to the provincial target of 2.0 meters.

11. Regeneration Date

Regeneration date has been shortened in the case of deciduous management to reflect the critical nature of early plantation establishment.